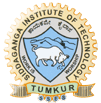
**Siddaganga Institute of Technology, Tumkur-572103**

**Department of Computer Science and Engineering**

**CRYPTOGRAPHY AND NETWORK SECURITY LAB (7CSL02)**

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| Student Name: | | | USN: | Batch No: | | Date: | |
| **Evaluation:** | | | | | | | |
| **Write Up (10 marks)** | **Clarity in concepts (10 marks)** | **Implementation and execution of the algorithms (10 marks)** | | | **Viva (05 marks)** | | **Total (35 marks)** |
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|  | | | | | | | |
| Sl.No | Name of the Faculty In-Charge | | | | | | Signature |
| 1. |  | | | | | |  |
| 2. |  | | | | | |  |
| **Question No: 2**  Write a program to perform the following using Playfair cipher technique   1. Encrypt a given message M with different keys {k1, k2,…,kn}. Print key and cipher text pair 2. Decrypt the cipher texts obtained in (i) to get back M | | | | | | | |
| **Playfair Cipher:**  Construct 5 X 5 matrix using a keyword from left to right and from top to bottom, and then filling in the remainder of the matrix with the remaining letters in alphabetic order. The letters I and J count as one letter.  Plaintext is encrypted two letters at a time, according to the following rules:   1. Repeating plaintext letters that are in the same pair are separated with a filler letter, such as x, so that balloon would be treated as ba lx lo on. 2. Two plaintext letters that fall in the same row of the matrix are each replaced by the letter to the right, with the first element of the row circularly following the last. 3. Two plaintext letters that fall in the same column are each replaced by the letter beneath, with the top element of the column circularly following the last. 4. Otherwise, each plaintext letter in a pair is replaced by the letter that lies in its own row and the column occupied by the other plaintext letter. | | | | | | | |